

Application No. 10/817,526
Response to Office Action

Customer No. 01933

Listing of Claims:

1. A method of joining a magnetic inner member and a magnetic outer member via a nonmagnetic materials ~~together in a process wherein material,~~ said method comprising:

inserting a ring of the nonmagnetic material into an annular
5 space formed between an the inner member and an the outer member
so as to be tightly fitted therein; each made of magnetic
material is fitted with a ring of nonmagnetic material,
characterized in that the method comprises the steps of:

bringing each of an inner and an outer peripheral surface of
10 the ring of nonmagnetic material each into a semi-molten state;
and

bringing the inner and outer peripheral surfaces of said
ring of nonmagnetic material into pressure contact with said
inner and outer members, respectively, to join said inner and
15 outer peripheral surfaces to said respective inner and outer
members, ~~respectively,~~ by interfacial fusion.

2. (Currently Amended) A method of joining a magnetic inner member and a magnetic outer member via a nonmagnetic materials ~~together as set forth in claim 1,~~ characterized in that material
by fitting a ring of the nonmagnetic material in an annular space

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5 formed between the inner member and the outer member, said method comprising:

bringing each of an inner and an outer peripheral surface of the ring of nonmagnetic material into a semi-molten state; and

10 bringing the inner and outer peripheral surfaces of said ring of nonmagnetic material into pressure contact with said inner and outer members, respectively, to join said inner and outer peripheral surfaces to said respective inner and outer members by interfacial fusion;

15 wherein the ring of nonmagnetic material is heated to a temperature sufficient to make it semi-molten, and the semi-molten ring of nonmagnetic material is then fitted into said annular space under pressure.

3. (Currently Amended) A method of joining a magnetic inner member and a magnetic outer member via a nonmagnetic materials ~~together as set forth in claim 1, characterized in that material~~ by fitting a ring of the nonmagnetic material in an annular space
5 formed between the inner member and the outer member, said method comprising:

bringing each of an inner and an outer peripheral surface of the ring of nonmagnetic material into a semi-molten state; and

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bringing the inner and outer peripheral surfaces of said
ring of nonmagnetic material into pressure contact with said
inner and outer members, respectively, to join said inner and
outer peripheral surfaces to said respective inner and outer
5 members by interfacial fusion;

wherein the ring of nonmagnetic material is fitted under
pressure into said annular space, and thereafter is heated by
high-frequency induction heating to a temperature sufficient to
make it semi-molten and is then compressed under pressure.

4. (Currently Amended) A method of joining a magnetic inner
member and a magnetic outer member via a nonmagnetic materials
together as set forth in claim 1, characterized in that material
by fitting a ring of the nonmagnetic material in an annular space
5 formed between the inner member and the outer member, said method
comprising:

bringing each of an inner and an outer peripheral surface of
the ring of nonmagnetic material into a semi-molten state; and

bringing the inner and outer peripheral surfaces of said
10 ring of nonmagnetic material into pressure contact with said
inner and outer members, respectively, to join said inner and
outer peripheral surfaces to said respective inner and outer
members by interfacial fusion;

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15 wherein the ring of nonmagnetic material is fitted under
pressure into said annular space, and thereafter a rotating body
is pressed against an end face of said ring of nonmagnetic
material whereby to generate a frictional heat ~~then-generated~~
~~heats to heat~~ said ring of nonmagnetic material to a temperature
sufficient to make it semi-molten.